

## ER Site No. 153: Bldg 9956 Septic Systems

ADS: 1295

Operable Unit: Septic Tanks and Drainfields

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### Site History

ER Site 153 includes the two septic systems serving Bldg. 9956. Bldg. 9956, the Hypervelocity Gun Facility, is located north of Bldg. 9920, 0.8 km (0.5 mi) east of Technical Area III. It was constructed in 1969 after the original Bldg. 9956 structure was blown up during explosives testing at Bldg. 9950. Bldg. 9956 contains a machine shop, air gun, photographic processing equipment, X-ray equipment, and shower facilities. Metal shavings from the machine shop may have entered the floor drain. Photographic processing is performed in a closed system, and very little processing waste is suspected to have entered the septic system.

The original septic system in Bldg. 9956 consisted of a 3,800 L (1,000 gal) septic tank and one 2.5-m (8-ft) diameter by 2.5-m (8-ft) deep seepage pit. This system is located on the east side of the building. The lack of restrictions on releases of contaminants to the original older system may have resulted in the disposal of radioactive or hazardous materials to this septic system. A new septic system, installed in 1988, consists of a 5-ft. by 8-ft septic tank and drainfield composed of four 50-ft. parallel PVC drainlines, located about 120 feet southwest of the building in a fenced-in area. The estimated effluent volumes for Site 153 range from 115 L/day (30 gal/day) to 1,700 L/day (450 gal/day). Both systems are no longer in service.

The site is approximately 162 meters (530 feet) above the regional water table.

### Constituents of Concern

The constituents of concern at the site include photographic processing chemicals (silver, cadmium, hexavalent chromium, and cyanide), black powder, beryllium, depleted uranium, explosives residue, and alcohol cleaning agents. Aqueous samples obtained from the new septic tank in 1991 found toluene, trichloroethylene (TCE), PCE, manganese, and phenolic compounds.

## Current Hazards

No known surface or subsurface hazards have been identified, based on environmental soil and soil-gas sampling that has been conducted at the site.

## Current Status of Work

The two septic tanks were sampled for waste characterization in 1994.

A passive soil gas survey performed in 1994 did not detect any volatile organic compound anomalies.

Soil sampling was performed in the fall of 1994 around the septic tanks, seepage pit, and in the drainfield.

Waste was completely removed from both septic tanks and the empty tanks were inspected by NMED in early 1996. The tanks were decontaminated, and concrete samples were collected from the tanks to verify that no COCs remained. The tanks were then backfilled with clean soil. The abandoned drainfields drainlines are still present at the site. The east system drainlines are buried at an average depth of 6.5 feet below the surface, and those for the west septic system are an average of 4.5 feet deep.

A confirmatory sampling No Further Action (NFA) proposal was submitted to the New Mexico Environment Department/ Hazardous Radioactive Materials Bureau (NMED/HRMB) in January 1997. NMED issued a Request for Supplemental Information (RSI) in June 1999, and SNL/NM responded to that RSI in September 1999. As of August 2001, further comments to the NFA proposal had not been received from NMED.

## Future Work Planned

Additional work may be completed at this site pursuant to the Small Septic Systems sampling and analysis plan (SAP).

## Waste Volume Estimated/Generated

One drum of radioactive waste, 2 drums of hazardous waste, and 4 drums of non-regulated septage waste were generated.

**Information for ER Site 153 was last updated Dec 11, 2001.**